

Application Number 10/533231

Response to the Office Action dated September 17, 2008

REMARKS

Favorable reconsideration of this application is requested in view of the following remarks.

Claim 1 has been amended to include limitations of original claims 11 and 17 and limit the wax B) to one or two types selected from the group as supported by the specification at page 17, lines 19-28. Accordingly, claims 11, 14, and 17 have been canceled without prejudice. Claims 2, 3, 4, 5, 6, 7, 15, and 16 have been amended editorially.

Claims 1 and 11-16 have been rejected under 35 U.S.C. 102(e) as being anticipated by Kobayashi et al. (U.S. Patent Application Publication No. 2003/0091923).

The rejection is moot since claim 17 has been included in claim 1.

Claim 17 has been rejected under 35 U.S.C. 103(a) as being unpatentable over the Kobayashi reference.

Kobayashi merely suggests use of a fluorine-modified silicone resins obtained by hydrolyzing an organosilicone compound and perfluoroalkyl-containing organosilicon compounds for a carrier (see para. [0030] and [0033] at page 3). The reference, however, fails to disclose that the fluorine-modified silicone resin is obtained by reaction of 3-20 parts by weight of the perfluoroalkyl-group-containing organosilicon compound and 100 parts by weight of a polyorganosiloxane as claim 1 requires. Actually, none of the examples in the reference includes fluorine-modified silicone resin.

In addition, Kobayashi merely suggests use of carnauba wax, polypropylene wax, or polyethylene wax in the toner (see [0046] and [0057]) and fails to disclose use of any of waxes A-D as claim 1 requires. The reference does not disclose any examples using the waxes.

Moreover, Kobayashi is directed to a carrier that achieves charge stabilization against environmental variations (see [0020]). In contrast, in claim 1, by using the particular fluorine-modified silicone resin including aminosilane coupling agent in a

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carrier as required by claim 1, the two-component developer of claim 1 can reduce carrier deterioration and improve resistance to toner-spent, stability of charging, and durability (see page 12, lines 12-17 of the specification). For example, see the carrier b4 of carrier manufacturing example 8, in which the fluorine-modified silicone resin is replaced with acrylic-modified resin, i.e., a carrier b4 is not a carrier of claim 1, which is similar to example 3 of Kobayashi and shows unsatisfactory results (see page 66, lines 24-28 and page 81, table 14 (row of dc7/Tc7/b4) of the specification and para. [0100]-[0101] of Kobayashi). Thus, there is no reasonable basis to assume that modification of the carrier of Kobayashi may improve the durability of the carrier of the two-component developer.

Accordingly, claim 17 is distinguished from Kobayashi, and this rejection should be withdrawn.

Claims 2 and 3 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. (U.S. Patent Application Publication No. 2003/0091923) and further in view of Mizoe et al. (U.S. Patent Application Publication No. 2003/0152856). Applicants respectfully traverse this rejection.

Claim 1 and accordingly, claims 2 and 3 are distinguished from Kobayashi for at least the same reasons as discussed for claim 1 above.

Mizoe discloses a resin material such as acrylic resin that coats surface of a core material (see para. [0365] and [0547]) but fails to disclose use of the fluorine-modified silicone resin containing an aminosilane coupling agent for a carrier of the two-component developer and accordingly, fails to disclose that the fluorine-modified silicone resin is obtained by reaction of 3-20 parts by weight of the perfluoroalkyl-group-containing organosilicon compound and 100 parts by weight of a polyorganosiloxane as claim 1 requires.

Thus, Mizoe does not remedy the deficiencies of Kobayashi, and claim 1 and accordingly, claims 2 and 3 are distinguished from Kobayashi in view of Mizoe. Accordingly, this rejection should be withdrawn.

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Claims 4, 5, and 7 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. (U.S. Patent Application Publication No. 2003/0091923) and further in view of Yuasa et al. (U.S. Patent Application Publication No. 2002/0086229). Applicants respectfully traverse this rejection.

Claim 1 and accordingly, claims 4, 5, and 7 are distinguished from Kobayashi for at least the same reasons as discussed for claim 1 above.

Yuasa discloses a carrier that has a coating layer including an acrylic based resin or a silicon based resin of magnetic core particles (see para. [0056]). Yuasa merely suggests use of silicone resin including organosiloxane and modified products of silicone resin with for example, alkyl, epoxy, urethane, fluorine resin, acrylic resin, etc. (see para. [0201]) and only discloses examples using methyl silicone resin or phenyl silicone resin (see table 8 in para. [0261]). The reference fails to disclose the particular crosslinkable fluorine-modified silicon resin used in a carrier and that the particular resin contains an aminosilane coupling agent and is obtained from a perfluoroalkyl group-containing organosilicon compound at least 3 parts by weight and no more than 20 parts by weight with 100 parts by weight of a polyorganosiloxane as claim 1 requires. Thus, Yuasa does not remedy the deficiencies of Kobayashi.

Accordingly, claim 1 and accordingly claims 4, 5, and 7 are distinguished from Kobayashi in view of Yuasa, and this rejection should be withdrawn.

Claims 6 and 8-10 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. (U.S. Patent Application Publication No. 2003/0091923) and further in view of Shimizu et al. (U.S. Patent No. 6,117,607). Applicants respectfully traverse this rejection.

Claim 1 and accordingly, claims 6 and 8-10 are distinguished from Kobayashi for at least the same reasons as discussed for claim 1 above.

Shimizu is directed to one component developer and discloses a toner containing chargeable fine particles (see coln. 2, lines 55-67). The reference lists aminosilane and fluorine-modified silicone oils as candidates for treatment agents of fine particles (see coln. 5, lines 33-39 and lines 57-66). Shimizu, however, fails to disclose a carrier of

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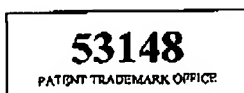
which the core material is coated with the particular fluorine-modified silicone resin containing aminosilane as claim 1 requires, and Shimizu does not remedy the deficiencies of Kobayashi. Thus, claim 1 and accordingly claims 6 and 8-10 are distinguished from Kobayashi in view of Shimizu, and this rejection should be withdrawn.

Claim 18 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. (U.S. Patent Application Publication No. 2003/0091923) and further in view of Yuasa et al. (U.S. Patent No. 6,579,653). Applicants respectfully traverse this rejection.

Claim 1 and accordingly, claim 18 is distinguished from Kobayashi et al. for at least the same reasons as discussed for claim 1 above.

In addition, Yuasa is directed to a toner (coln. 11, lines 25-36), and magnetic fine power, whose surface is treated with materials such as the aminosilane coupling agent, may be added to a black toner to form a magnetic toner (see coln. 24, lines 36-37 and coln. 26, lines 26-30 and lines 50-54). In contrast, the aminosilane coupling agent of claim 1 is used in the fluorine-modified silicone resin composition for coating the core material of a carrier. Accordingly, there is no reasonable basis to combine Yuasa with Kobayashi for the carrier coating resin, and this rejection should be withdrawn.

In view of the above, Applicants request reconsideration of the application in the form of a Notice of Allowance.



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DPM/my/ad

Respectfully submitted,

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